

Joe Bennett  
Music Services

## PRIVILEGED AND CONFIDENTIAL

## MUSICOLOGIST'S REPORT

8 September 2019

### **Re: Comparison of 'Help Me Put Out The Flame (In My Heart)' and 'Paper Chase' and 'Toe 2 Toe'**

To whom it may concern:

I am instructed by representatives of Ernie Hines to comment on any similarities between the following audio recordings and compositions:

- **Help Me Put Out The Flame (In My Heart)** (from hereon, 'FLAME'). Composed and recorded by Ernie Hines, and originally released as a single on Stax records in 1970. I am working from the recording taken from The Complete Stax/Volt Soul Singles, Vol. 2: 1968-1971. Release & registration date: August 31, 1993
- **Paper Chase** (from hereon, 'PAPER'). Composed by Timothy Z Mosley and Shawn C Carter (aka Jay-Z). Recorded by Jay-Z feat. Foxy Brown; produced by Timbaland. Released on the Jay-Z album *Vol. 2... Hard Knock Life* in 1998.
- **Toe 2 Toe** (from hereon, 'TOE'). Composed by Lumpkin/Mosley. Performed by Ginuwine (aka Elgin Baylor Lumpkin). Released on the Ginuwine album *100% Ginuwine* in 1999.

### **EXECUTIVE SUMMARY OF FINDINGS**

- Part of the FLAME audio recording has been sampled in PAPER.
- Part of the FLAME composition has been copied in PAPER.
- Part of the FLAME audio recording has been sampled in TOE.
- Part of the FLAME composition has been copied in TOE.
- In both PAPER and TOE, the source of the copy is the guitar intro of FLAME (the FLAME RIFF), which forms part of the composition FLAME, and also the sound recording of FLAME.
- I have high technical confidence in my conclusions regarding the authenticity of the sample of the FLAME RIFF as it appears in PAPER and TOE.

JOE BENNETT MUSIC SERVICES

Registered office: 1 Walcot Gate, Bath, Somerset BA1 5UG  
Company number: 9505096

Professor Joe Bennett PhD BA NTF FHEA

info@joebennett.net | www.joebennett.net

Phone: +1 (857) 327 1159

## **Summary of findings and opinions (FLAME sampled/copied in PAPER)**

- In my opinion, PAPER has sampled audio and compositional notes from FLAME. I have high confidence in this conclusion.
- I can detect 308 FLAME guitar samples in the 1998 version of PAPER.
- FLAME samples can be heard for approximately 84% of PAPER's runtime – 11 out of 13 8-bar sections.
- In my opinion, the guitar intro riff in FLAME would be instantly recognizable to anyone familiar with the song.
- In my opinion the FLAME RIFF is qualitatively distinctive, and, being an unaccompanied intro, could be considered a compositionally important and memorable part of FLAME.

## **Summary of findings and opinions (FLAME sampled/copied in TOE)**

- In my opinion, TOE has sampled audio (and compositionally copied) from FLAME. I have high confidence in this conclusion.
- I can detect at least 44 FLAME guitar samples in the 1999 version of TOE.
- The FLAME sample appears throughout TOE – 100% of its runtime of 2m14s.
- The FLAME sample is played as a single note sample, followed by a 5-note sample (lasting one bar), followed by both of these samples again, sounding one half-step lower in pitch (lasting one bar). This 2-bar sequence makes up the guitar audio loop that cycles throughout TOE.
- In my opinion, the FLAME guitar riff would be instantly recognizable to anyone familiar with the song.
- In my opinion, the FLAME RIFF is qualitatively distinctive, and, being an unaccompanied intro, could be considered a very important and memorable part of the composition FLAME.

## **Methodology**<sup>1</sup>

Between February and July 2018 I was provided with audio files of FLAME and PAPER, as they were commercially released in 1993 (original vinyl 1970) and 1998 respectively. I imported these audio files into various software applications and converted them into industry standard AIFF files (audio interchange file format). This enabled me to ‘zoom in’ on particular sections of audio, to slow down the audio for detailed listening (time stretching), to view the audio files in graph form to isolate particular parts of the sound (spectrum analysis), and to see visual representations of the similarities/differences between the recordings (waveform analysis).

I also attempted to reverse-engineer Jay-Z’s creative process by importing the FLAME RIFF into my own sampler and, through experimentation and sample manipulation, to test whether it was possible to use audio from FLAME to make a guitar part that sounded exactly like that of PAPER.

Finally, I was provided with a professionally-produced transcription of FLAME, which I understand to be the definitive updated version, as filed with the US Copyright Office.

Before beginning the analysis, I informed my clients that my analysis, inferences and findings would be objective and impartial.

## Musical facts

- FLAME is performed at a tempo of 109.56 BPM (varies due to live band).
- PAPER is performed at a tempo of 90.08 BPM (fixed, due to computer-based tempo).
- TOE is performed at a tempo of 87.03 BPM (fixed, due to computer-based tempo).
- FLAME begins with a 3-bar guitar riff, played in the key of G minor, starting and ending on a note of G, and ending with a tremolando (fast-strummed) chord of G minor.
- PAPER is based on an 8-bar loop in the key of G minor, which repeats throughout 13 times, and features a guitar part in 11 of the 13 repeats.
- TOE is based on a 2-bar loop, based on one-bar guitar riff sounding in G minor, followed by the same one-bar guitar riff, sounding in F# minor (one half-step lower).

## Context – the FLAME RIFF

It is alleged that PAPER and TOE may have sampled audio and copied melodic compositional elements from the opening three-bar guitar riff of FLAME (from hereon, the '**FLAME RIFF**'). The original 1970 guitar riff is shown below as music notation.

Fig. 1 – FLAME RIFF (1970)<sup>2</sup><sup>3</sup>

Intro

Vocal

Elec. Guitar

$\text{♩} = 140$

$\text{♩} = 108$

Gm

(1.) When - ev - er you kiss...

<sup>2</sup> Technical note: the notation transcription assumes an 8<sup>th</sup>-note rest on the downbeat, which is how I subjectively hear Hines's timing. However, FLAME's intro contains no drum part, so it is impossible to tell how Hines intends the beat to fall compositionally. However, even if others disagree with my musical interpretation of Hines's timing, the rhythmic note values are contextually accurate and, when sampled, the placement of the barline is not relevant – because samples can be triggered at any point in the bar.

<sup>3</sup> The notation shown here, with the guitar riff highlighted, is excerpted from the updated version that was provided to me by my clients, and which I understand to be the definitive/exhaustive transcription of FLAME, correcting previous errors and omissions.

The FLAME RIFF contains a musical allusion to the famous *Mysterioso Pizzicato* (aka the ‘movie villain’s theme’<sup>4</sup>), a melody that appeared first in 1914 and was common in silent film in the early 20<sup>th</sup> century (and is presumably non-copyright). However, Ernie Hines’s guitar part uses some different pitches and rhythmic values from MP, and should therefore be considered an original melody composed by Hines. In context, the FLAME RIFF serves as the guitar intro to FLAME (the composition), and in my opinion is independently recognizable by anyone familiar with FLAME.

On analyzing PAPER, it appears to contain many occurrences of three sections taken from the FLAME RIFF, described here in the order they appear in FLAME, and highlighted in the rectangles in **Fig. 2** below:

- MELODY: a five-note section from the middle of the riff consisting of the notes D-G-Eb-D-C
- NOTE: A single one-note sample of the last note of G (possibly the first note – they are the same note)
- CHORD: A sample of the final G minor chord with its distinctive tremolando (rapid strumming)

**Fig. 2 – FLAME RIFF (1970) with MELODY, NOTE and CHORD highlighted**

Guitar

Gm

**Context – elements of the FLAME RIFF as allegedly sampled (and compositionally copied) in PAPER**

- PAPER is based on an 8-bar loop, broken into 4 similar sections of two bars each.
- The guitar part in PAPER repeats through most of the song, occasionally dropping out and then returning.
- PAPER’s guitar part is heard as shown below in the notation **Fig. 3**. I have highlighted the usage of the three apparent FLAME samples as NOTE, MELODY and CHORD where I believe they occur.

---

<sup>4</sup> [https://en.wikipedia.org/wiki/Mysterioso\\_Pizzicato](https://en.wikipedia.org/wiki/Mysterioso_Pizzicato)

**Fig. 3 – PAPER guitar part (FLAME samples highlighted)**

**Musical commentary – FLAME and PAPER**

- The pitches heard in the guitar part of PAPER sound identical to the pitches heard in FLAME.
- The rhythmic values of the MELODY section are, contextually, identical to those heard in FLAME.
- The voicing (i.e. notes played, in order) of the guitar chord in PAPER is identical to the voicing of the guitar chord in FLAME.

These elements lead me to believe that FLAME is the likely source of the musical material in PAPER's guitar part.

**Fig. 4 – TOE guitar part (FLAME RIFF used as above – NOTE, CHORD and MELODY)**

The musical notation consists of two staves. The top staff is in G major (Gm) and the bottom staff is in F# minor (F#m). Both staves are in 4/4 time. The top staff starts with a Gm chord (B, D, G) followed by a rest. The bottom staff starts with a dotted quarter note followed by a melodic line consisting of eighth and sixteenth notes.

#### **Musical commentary – FLAME and TOE**

In TOE, the extract of FLAME is used very similarly to the way it is used in PAPER. The three elements of NOTE, CHORD and MELODY are separately sampled/copied, the difference being that bar two includes the MELODY transposed down a half-step (a basic/ubiquitous feature of all samplers, then and now). Apart from that contextual difference, the usage of the FLAME sample in TOE is otherwise the same:

- The pitches heard in the guitar part of PAPER sound identical to the pitches heard in TOE (in bar 1, and a half-step lower in bar 2 of TOW).
- The rhythmic values of the MELODY section are, contextually, identical to those heard in FLAME.
- The voicing (i.e. notes played, in order) of the guitar chord in PAPER is identical to the voicing of the guitar chord in FLAME.

#### **Likelihood of audio sampling as the method of copying**

It is possible to copy musical ideas from a work without necessarily sampling the audio of the original recording. Therefore, even in cases where melodic elements sound the same, to identify whether audio sampling has occurred we must compare the tonal characteristics of the respective recordings – in this case, the distinctive electric guitar sounds in FLAME.

Using music software, I compared the guitar parts of FLAME with both PAPER and TOE, testing for the following characteristics:

- Decay envelope (the speed with which the ‘twang’ of the guitar dies away)
- Reverb context (the ambient echo in the background)
- Spectral qualities (the frequencies in the sound that give the guitar its distinctive tone)
- Noise (background tape hiss and related noise)
- Player style (Ernie Hines’s distinctive tremolando strumming in the CHORD)

In each case I found an exact match – that is, I could tell no difference in the sonic qualities of the two guitar parts in FLAME and PAPER.

Note: I have omitted waveform diagrams and spectrograms from this report because they may not be clear to the non-specialist reader, but I can provide these on request if needed.

## **Reverse engineered demo recording, recreating PAPER**

As a final check, I attempted to use audio samples taken solely from FLAME to recreate the guitar part that is heard in PAPER, by importing FLAME into my own sampler, and aligning each sample from FLAME with its apparent occurrence in PAPER.

- Using only samples from FLAME, I was able to recreate an exact copy of PAPER's guitar part, which when played at the same time as PAPER, sounded identical (AUDIO EXAMPLE 3).
- Further, I was able to create an accurate backing track of PAPER using only a drum loop and audio sampled from FLAME (AUDIO EXAMPLE 4).

## **Audio examples**

I have made various comparative audio files (including the reverse engineered demo recording). I have provided online access to these via a separate communication to my client.

- **AUDIO EXAMPLE 1: FLAME (1970)**. Ernie Hines's original 1970 release in full.
- **AUDIO EXAMPLE 2: PAPER (1998)**. Jay-Z's original 1998 release in full.
- **AUDIO EXAMPLE 3: Reverse engineered demo**. FLAME SAMPLE (left channel) overlaid on PAPER (right channel). FLAME riff added at start for context.
- **AUDIO EXAMPLE 4: PAPER guitar part** (with added drums). Recreated using only samples of FLAME + drums. FLAME riff added at start for context.
- **AUDIO EXAMPLE 5: PAPER guitar part** (no drums). Recreated only using samples of FLAME (begins with count-in)

The original recording of TOE is available online from streaming and download services, and on YouTube at <https://www.youtube.com/watch?v=PRIROIcJRIA>.

### **Likelihood of sampling**

I have undertaken technical tests, visual analyses, reverse engineering tests and close listening (several thousand iterations in a studio and headphone environment).

- In my opinion PAPER contains three easily identifiable samples from the guitar part of FLAME – the MELODY, NOTE and CHORD.
- In my opinion TOE contains three easily identifiable samples from the guitar part of FLAME – the MELODY, NOTE and CHORD.
- I have extremely high confidence in this conclusion and I do not believe that any other method (than sampling from FLAME) could have been used to create the guitar part as it is heard throughout PAPER.

### **Extent of sampling/copying – FLAME and PAPER**

- Each 8-bar loop in PAPER contains 28 triggered samples (20 instances of the NOTE, 6 of the MELODY and 2 of the CHORD) which, in my opinion, are almost certainly taken from FLAME.
- Therefore I estimate there to be 28 (samples) x 11 (sections) of FLAME in PAPER i.e. 308 individual samples.
- PAPER's 8-bar sequence repeats 13 times in total, of which 11 instances feature the sampled guitar part. We can therefore say that approximately 84% of PAPER contains audio samples of the FLAME RIFF.
- During sections where the guitar part drops out, a synthesiser is heard playing the same notes as were previously played by the guitar (and derived from FLAME). We might arguably say that all 13 sections of PAPER contain compositional melodic material derived from FLAME (i.e. 100%).

### **Extent of sampling/copying – FLAME and TOE**

- I can detect at least 44 FLAME guitar samples in the 1999 version of TOE.
- The FLAME RIFF appears throughout TOE – 100% of its runtime of 2m14s.
- The FLAME RIFF is played as a single note sample, followed by a 5-note sample (lasting one bar), followed by both of these samples again, sounding one half-step lower in pitch (lasting one bar). This 2-bar sequence makes up the guitar audio loop that cycles throughout TOE.

## **Summary of findings and opinions (copied from page 2)**

### **1. (FLAME sampled/copied in PAPER)**

- In my opinion, PAPER has sampled audio and compositional notes from FLAME. I have high confidence in this conclusion.
- I can detect 308 FLAME guitar samples in the 1998 version of PAPER.
- FLAME samples can be heard for approximately 84% of PAPER's runtime – 11 out of 13 8-bar sections.
- In my opinion, the guitar intro riff in FLAME would be instantly recognizable to anyone familiar with the song.
- In my opinion the FLAME RIFF is qualitatively distinctive, and, being an unaccompanied intro, could be considered a very important and memorable part of the composition FLAME.

### **2. (FLAME sampled/copied in TOE)**

- In my opinion, TOE has sampled audio (and compositionally copied) from FLAME. I have high confidence in this conclusion.
- I can detect at least 44 FLAME guitar samples in the 1999 version of TOE.
- The FLAME sample appears throughout TOE – 100% of its runtime of 2m14s.
- The FLAME sample is played as a single note sample, followed by a 5-note sample (lasting one bar), followed by both of these samples again, sounding one half-step lower in pitch (lasting one bar). This 2-bar sequence makes up the guitar audio loop that cycles throughout TOE.
- In my opinion, the FLAME guitar riff would be instantly recognizable to anyone familiar with the song.
- In my opinion, the FLAME RIFF is qualitatively distinctive, and, being an unaccompanied intro, could be considered a very important and memorable part of the composition FLAME.

Please contact me if you have any questions, or if further analysis or commentary is needed.

Best regards,

A handwritten signature in black ink that reads "Joe Bennett". The signature is fluid and cursive, with "Joe" on the left and "Bennett" on the right, connected by a flourish.

Prof Joe Bennett PhD

## APPENDIX 1: Lay persons' comments and opinions

- The music streaming service TIDAL provides an online playlist featuring all of *Vol. 2... Hard Knock Life* and the songs from which it sampled. PAPER and FLAME both appear on this playlist, with FLAME credited as a sample source for PAPER.  
<https://listen.tidal.com/playlist/a192bf80-57e2-4753-b09e-dac2cfa6de11>

**Fig. 4 – screenshot of TIDAL online playlist crediting FLAME as the sample used in PAPER**

#	TITLE	ARTIST	ALBUM	TIME			
1	Intro - Hand It Down	JAY-Z, Memphis Bleek	Vol. 2... Hard Knock L...	2:56	☆	♬	...
2	Are You Man Enough? (Single Ver...)	Four Tops	Shaft In Africa (Soun...	3:22	☆	♬	...
3	Hard Knock Life (Ghetto Anthem)	JAY-Z	Vol. 2... Hard Knock L...	3:58	☆	♬	...
4	Annie: It's the Hard-Knock Life	Andrea McArdle, Ann...	Annie (Original Broad...	2:21	☆	♬	...
5	Nigga What, Nigga Who (Originato...)	JAY-Z, Big Jaz	Vol. 2... Hard Knock L...	3:53	☆	♬	...
6	Sunshine	Earth, Wind & Fire	Gratitude	4:17	☆	♬	...
7	Cheers 2 U	Playa	Cheers 2 U	5:11	☆	♬	...
8	A Week Ago	JAY-Z, Too \$hort	Vol. 2... Hard Knock L...	5:00	☆	♬	...
9	Ballad for the Fallen Soldier	The Isley Brothers	Between the Sheets	5:19	☆	♬	...
10	Paper Chase	JAY-Z, Foxy Brown	Vol. 2... Hard Knock L...	4:34	☆	♬	...
11	Help Me Put Out The Flame (In My...)	Ernie Hines	The Complete Stax / ...	3:12	☆	♬	...
12	Reservoir Dogs	JAY-Z, The Lox, Sauc...	Vol. 2... Hard Knock L...	5:19	☆	♬	...
13	Theme From Shaft (Album - Rema...)	Isaac Hayes	Shaft (Deluxe Edition)	4:39	☆	♬	...
14	It's Like That	JAY-Z, Kid Capri	Vol. 2... Hard Knock L...	3:45	☆	♬	...

The promotional text provided by TIDAL for this playlist reads as follows <my emphasis>;

“ ‘Vol. 2... Hard Knock Life’ is without question one of the most important albums in JAY-Z’s discography. It’s filled with hit records that still resonate with fans today and also defines a pivotal moment in his career when he first became a multi-platinum rap superstar. Celebrate the 19th birthday of Hov’s classic (September 29) with these album highlights paired with the songs they sampled, including the historic use of the ‘Annie’ movie’s “It’s A Hard-Knock Life” theme song for the title track.”

- The website WhoSampled contains a page dedicated to PAPER which cites FLAME as the source of its sample. <https://www.whosampled.com/Jay-Z/Paper-Chase/>
- The same site also contains a page dedicated to FLAME which cites PAPER as using it. [https://www.whosampled.com/Ernie-Hines/Help-Me-Put-Out-the-Flame-\(In-My-Heart\)/](https://www.whosampled.com/Ernie-Hines/Help-Me-Put-Out-the-Flame-(In-My-Heart)/)

- The following website describes several samples used on the Jay-Z album ‘Vol. 2... Hard Knock Life’, and also cites PAPER as sampling FLAME.  
<http://www.culturalfront.org/2016/03/jay-zs-vol-2hard-knock-life-sampling.html>

## **APPENDIX 2: FLAME – full transcription**

(see next page) This is the definitive musical transcription of FLAME, as provided to me for analysis. The guitar riff, which represents the material that I believe has been copied, is highlighted in yellow, and can be found atop the first page.

# Help Me Put Out The Flame (In My Heart)

Words & Music: Earnest L. Hines & Luval Wesby

Intro

*Vocal*  $\text{♩} = 140$   $\text{Gm}$

*Elec. Guitar*  $\text{♩} = 108$

(1.) When - ev - er you kiss -

**S** Verse

$\text{Gm}$

[6][13][55] — me, I feel a burn-ing de - si - re. Yeah!— Like you took a match.

(Verses 2 & 3, see block lyrics)

$\text{C}^7$   $\text{D}^7$   $\text{Gm}$

[8][17][59] — girl — and set my soul on fi - re. Ooh, yeah.. You got me

$\text{D}$   $\text{C}$   $\text{B}^{\flat}$   $\text{C}^6$   $\text{D}$

[12][31][63] run - ning a - round in cir - cles, got me so I don't e - ven know my name. — Some - bo - dy

Chorus

$\text{B}^{\flat}$   $\text{Gm}$   $\text{D}^7$   $\text{Gm}$  To Coda  $\text{Ø}$

[16][35][67] tell me what can I do? Uh huh. To put out the flame... in my heart.

$\text{C}^7$   $\text{Gm}$   $\text{F}$   $\text{C}^9$

[20][39] — Help me put out the flame. (2.) When - ev - er I'm You know you've

## Bridge

Gm C<sup>9</sup> Gm C<sup>9</sup>

[42] got me un - der your spell. I don't know why I wish I could tell. Don't ev - en

Gm C<sup>9</sup> Gm B♭

[46] know. day from\_ night. Don't ev - en care if it's wrong or right.

C D B♭ Gm F D.S. al Coda ①  
(Verse 3)

[50] Yeah! (B.V.) Tell me what can I do. Whoa. (3.) When - ever you

## ① Coda

C<sup>9</sup> B♭ Gm D<sup>7</sup>

[54] — Some-bo - dy tell me what can I do to put our the flame

## Fade

Gm C<sup>9</sup> Gm C<sup>9</sup>

[58] in my heart. You've got me feel-ing like I've nev - er felt be - fore. And I

Gm C<sup>9</sup> Gm C<sup>9</sup>

[62] know we're gon - na take more than H 2 O. So help me to put our

C<sup>9</sup> Gm C<sup>9</sup>

[66] the flame. I've got - na have your love to put our this flame... Cont. sim. to fade

### ***Verse 1***

Whenever you kiss me I feel a burning desire (Yeah!)  
Like you took a match, girl, and set my soul on fire (*Ooh yeah!*)  
You got me running around in circles  
Got me so I don't even know my name

### ***Chorus***

Somebody tell me, what can I do? (Uh huh!)  
To put out the flame – in my heart  
Help me put out the flame

### ***Verse 2***

Whenever I'm with you, time has no meaning  
Like the world standing still, but left me here dreaming  
Baby, you got me in a whirlwind  
Sometimes I feel it's just a game

### ***Chorus***

Somebody tell me, what can I do? (Yeah!)  
To put out the flame – in my heart  
Help me put out the flame

### ***Bridge***

You know you've got me under your spell  
I don't know why I wish I could tell  
Don't even know day from night  
Don't even care if it's wrong or right (Yeah!)

### ***Verse 3***

Whenever you leave me, I go out of my mind  
It's like being in a tantrum, baby, *I've reached the pressure line* (Yeah!)  
You know you've got me going out of my head  
Sometimes I feel insane

### ***Chorus***

Somebody tell me, what can I do?  
To put out the flame – in my heart  
*Somebody tell me, what can I do?*  
*To put out the flame – in my heart*  
Help me put out the flame

### ***Fade***

*You've got me feeling like I've never felt before*  
*And I know it's going to take more than H2O*  
*So help me to put out the flame*  
*I've gotta have your love to put out this flame...*

## **Summary Of Amendments (June 2019)**

### ***Guitar Intro***

The **Guitar Intro** (measures 1–3), a unique and iconic part of this song, was omitted from the original transcription but has been added in this updated transcription.

### ***Key***

The original transcription was written out in the key of F minor. This has been corrected to G minor to match the recording.

### ***Song Form***

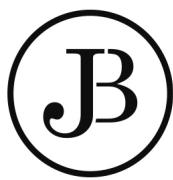
While it is customary to utilize repeat notation and other devices (such as Coda and Segno directions) to avoid unnecessary repetition and help to show where sections are near-identical repeats with alternate lyrics, the original transcription omitted to notate some unique sections (in addition to the **Guitar Intro** noted above). These have been added in this updated transcription and highlighted in yellow in the score:

Bridge       (measures 42–54)  
Chorus 3     (this chorus is extended in the Coda: measures 71–74)  
Fade          (measures 75–End)

### ***Lyrics***

A full set of lyrics, as they appear in the recorded song, are included on page 3. The following conventions were used to highlight any changes:

- Lyrics appear in green underlined if they were edited from how they appeared in the original transcription.
- Lyrics appear in *red italic* if they were added to correct omissions in the original transcription.



## **Qualifications and experience**

Joe Bennett has been analysing and transcribing popular music for international publication since 1994. He has written more than 30 books, including transcription, teaching and reference works (published worldwide by Music Sales Group), and more than 300 articles for Total Guitar magazine and others, relating to classic songs, guitar techniques and songwriting. As a songwriter and composer his work is published by Music Sales Group, Misty Music and Rockschool Ltd. He is a writer member of PRS for Music and the British Academy of Composers and Songwriters, and an academic member of (and peer reviewer for) IASPM (the International Association for the Study of Popular Music).

As an academic (Professor of Popular Music at Bath Spa University UK and Vice President of Academic Affairs at Berklee USA) Joe's primary area of research expertise is the psychology of songwriting and similarity thresholds in popular songs. His PhD research (University of Surrey, UK) was entitled '*Constraint, Creativity, Copyright and Collaboration in Popular Songwriting Teams*' and it provided the world's first detailed systematic investigation into collaborative songwriters' creative processes. Joe was awarded a National Teaching Fellowship (NTF) in 2004 by the UK Higher Education Academy in recognition of his contribution to the teaching and learning of popular music. This award was used to fund research into the creative processes used by songwriters and culminated in Joe founding the UK Songwriting Festival. He is a Fellow of the Higher Education Academy.

As a forensic musicologist, Joe's past clients include Universal Music Publishing, Warner/Chappell Music Publishing, Adelphoi Music, Kassner Music Publishing, JWT, BBH, Loeb & Loeb LLP, Simpson & Marwick LLP, Michael Simkins LLP, Edwards Wildman Palmer LLP, Swan Turton LLP, Woo Kwan Lee and Lo (Hong Kong) and Van Straten solicitors, as well as many individual songwriters. Recent media interviews include The Daily Telegraph, NPR, The New York Times, The LA Times, BBC TV news, BBC TV The One Show, BBC Radio 4 Today Programme, MTV news, Discovery Channel, Rolling Stone, Newsweek and The Guardian.<sup>5</sup> He is listed on the UK Music Publishers' Association's Register of Expert Witness Musicologists and the American Musicological Society's database of forensic musicologists.<sup>6</sup>

### **Recent peer-reviewed conference papers/publications:**

- "Songwriting, Digital Audio Workstations, and the Internet". In *The Oxford Handbook of the Creative Process in Music*, edited by Nicholas Donin (Oxford University Press, in press, 2018).
- "Wrongful Appropriation and Copyrightability in Music Copyright". Joe Bennett and Wendy Gordon. *Works-in-Progress Intellectual Property (WIPIP) Colloquium*, Boston University School of Law, February 2017.
- "I Hate These Blurred Lines: The Intrinsic Test In Music Copyright Disputes". Joe Bennett and Wendy Gordon. The 11th Art of Record Production Conference, Aalborg University, Denmark, December 2016.
- "Where is creativity? Locating intellectual property in collaborative songwriting and production processes." In *International Association for the Study of Popular Music (IASPM) UK & Ireland*, University College Cork, 12-14 Sept 2014.
- "Who Writes the Songs? Creative Practice and Intellectual Property in Popular Music's Digital Production Chain." In *Creativity, Circulation and Copyright: Sonic and Visual Media in the Digital Age*, CRASSH Centre For Research In The Arts, Social Sciences And Humanities. Cambridge University 28-29 March 2014
- "Forensic Musicology: approaches and challenges." In *The Timeline Never Lies: Audio Engineers Aiding Forensic Investigators in Cases of Suspected Music Piracy*. Audio Engineering Society, New York, USA, October 2013.
- "Two Worlds Collide: originality and plagiarism in songwriting". International Association for the Study of Popular Music (IASPM) conference, Gijon, Spain, June 2013.
- "Applying Melodic Analysis to Infer the Extent of Plagiarism in Popular Song Authorship Disputes." Popular Music Analysis (PopMAC) conference, University of Liverpool, July 2013.
- "Constraint, Collaboration and Creativity in Popular Songwriting Teams." In *The Act of Musical Composition: Studies in the Creative Process*, David Collins (ed), 139–169. Studies in The Psychology of Music. Ashgate, 2012.
- "Collaborative Songwriting – the Ontology of Negotiated Creativity in Popular Music Studio Practice." *Journal on the Art of Record Production* #5, 2011.

<sup>5</sup> <http://www.theguardian.com/money/2015/jan/20/how-become-forensic-musicologist>

<sup>6</sup> A more detailed academic CV with downloads can be found at <http://joebennett.net/academic-profile/>.